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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,308	09/25/2000	Philip Jeffrey Anthony	CEL1.0011	3511

7590

09/05/2002

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EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 09/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/669,308

Applicant(s)

ANTHONY ET AL.

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: ____.

DETAILED ACTION

1. This communication is responsive to the applicants' application filed on 09/25/2000.
2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 3, filed on 09/25/2000.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Fincham (US-5,548,657).

Regarding claim 1, Fincham disclose a compound loudspeaker drive unit, comprising: a first diaphragm (34) having an first coil (36) thereon; a second diaphragm (21) having a second coil (24) thereon formed on a periphery of the first diaphragm (Fig.); a first seat (19-20) having a first magnet structure (17) and defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat (28) having a second magnet structure (Fig.) as claimed.

Regarding claims 2-3 and 7, Fincham further disclose the compound loudspeaker drive unit, wherein both magnets are substantially disk shaped (Fig.) and made of neodymium iron boron magnets as claimed.

4. Claims 1-3, 7-11 and 15-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Esposto (US-5,339,286).

Regarding claim 1, Esposto disclose a compound loudspeaker, comprising: a first diaphragm (11) having an first coil (13) thereon; a second diaphragm (5) having a second coil (7) thereon formed on a periphery of the first diaphragm (Fig. 1); a first seat (1) having a first magnet structure (8) and defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat having a second magnet structure (14) as claimed.

Regarding claims 2-3, 7 and 16-19, Esposto further disclose the compound loudspeaker, wherein both magnets are substantially disk shaped (Fig. 1) and made of neodymium iron boron magnets as claimed.

Regarding claims 8-11, Esposto further disclose the compound loudspeaker, wherein the second seat is positioned to enclose the first magnet (Fig. 1) as claimed.

Regarding claim 15, Esposto disclose a compound loudspeaker, comprising: a first diaphragm (11) having an first coil (13) thereon; a second diaphragm (5) having a second coil (7) thereon formed on a periphery of the first diaphragm (Fig. 1); a first seat (1) having a first wall and a first magnet structure (8) and defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat having a second magnet structure (14) as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham (US-5,548,657) in view of Paddock (US-5,604,815).

Regarding claims 4-6, Fincham does not clearly teach that the magnets can be magnetized after assembly as claimed. Paddock discloses a method of manufacturing a loudspeaker, including a step of magnetizing the magnet after assembly. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to magnetize the magnets after assembly the loudspeaker as an alternate choice, for reliably manufacturing loudspeakers.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham (US-5,548,657) in view of Kotsatos et al. (US-5,894,524).

Regarding claims 12-14, Fincham does not clearly teach a ferrofluid as claimed. Kotsatos et al. discloses a high power tweeter, having a ferrofluid (50) in a magnetic gap. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a ferrofluid into the magnetic gap of the loudspeaker as an alternate choice, for reducing heat and increasing output power.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esposto (US-5,339,286) and Fincham (US-5,548,657), further in view of Paddock (US-5,604,815).

Regarding claim 20, Esposto disclose a compound loudspeaker, comprising: a first diaphragm (11) having an first coil (13) thereon; a second diaphragm (5) having a second coil (7) thereon formed on a periphery of the first diaphragm (Fig. 1); a first seat (1) having a first wall and a first magnet structure (8) and defining an annular opening to allow said second coil to be moveably suspended therein; and a second seat having a second magnet structure (14) as claimed. But Esposto does not clearly teach that the second diaphragm is conically configured as claimed. Fincham discloses a compound loudspeaker having a conical diaphragm for generating low frequency sound. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a conical shaped diaphragm for the second diaphragm of the

compound loudspeaker as an alternate choice, for enhancing acoustic characteristics for the compound loudspeaker.

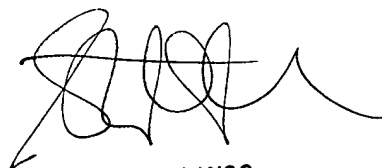
Furthermore, neither Esposto nor Fincham teach that the magnets can be magnetized after assembly as claimed. Paddock discloses a method of manufacturing a loudspeaker, including a step of magnetizing the magnet after assembly. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to magnetize the magnets after assembly the loudspeaker as an alternate choice, for reliably manufacturing loudspeakers.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the number for fax machine is (703)-305-9508. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.



STELLA WOO
PRIMARY EXAMINER

SN

September 02, 2002